



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,138	03/17/2004	Che-Hsiung Hsu	UC0403USNA	3270
23906 7590 05/10/2007 E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1128 4417 LANCASTER PIKE WILMINGTON, DE 19805			EXAMINER KOPEC, MARK T	
			ART UNIT 1751	PAPER NUMBER
			MAIL DATE 05/10/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/802,138

Applicant(s)

HSU ET AL.

Examiner

Mark Kopec

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 10-17, 21-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

Applicant's election without traverse of Group I in the reply filed on 04/16/07 is acknowledged. Claims 10-17 and 21-23 are withdrawn from consideration.

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892 or by applicant on form PTO-1449, they have not been considered.

Applicant is advised that should claims 4 or 5 be found allowable, claims 18 and/or 19 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by

Art Unit: 1751

a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-9 and 18-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3, 6-9, 11-25, 27 and 28 of copending Application No. 10/803,114. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the instant claims and the allowed claims of 10/803,114 are drawn to conductive compositions comprising polydioxothiophene, colloid-forming polymeric acid, and solvent mixture (of water and organic solvent). The instantly recited range of "weight ratio ...is at least 0.1" and the allowed limitation of "...at least 60% by weight at least one

Art Unit: 1751

organic liquid" substantially overlap in scope and are obvious in view of each other.

Claims 1-9 and 18-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 10/815,054. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the instant claims and the allowed claims of 10/815,054 are drawn to conductive compositions comprising polydioxothiophene, colloid-forming polymeric acid, and solvent mixture (of water and organic solvent). The instantly recited range of "weight ratio ...is at least 0.1" and the allowed limitation of "...at least 40% by weight water" substantially overlap in scope and are obvious in view of each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Art Unit: 1751

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Initially, applicant's definitions of "weight ratio...to total polymer" at page 5 and "colloid-forming polymeric acid" at page 9 are noted.

Claims 1-9 and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsu et al (2004/0102577).

Hsu discloses aqueous dispersions of polythiophenes and colloid-forming polymeric acids (Abstract; 0028). The reference specifies each of the claimed components: PEDOT/Nafion dopant (0035-0036); pH and additional adjuncts (0063-0064) and water/solvent mixture 5-50 vol% (0053). The reference specifically or inherently meets each of the claimed limitations.

The reference is anticipatory.

Art Unit: 1751

Claims 1-4, 8 and 18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jonas (5,300,575).

Jonas discloses dispersion of polythiophene (PEDOT) and polyanion as antistatic treatment of plastic moldings (Abstract; Col 2, lines 12-60). The reference specifies polyacrylic acids or poly-sulfonic acids, additional binder additives, (Col 2, lines 45-60; Col 4, lines 38-42), and additionally teaches water/solvent mixtures within the claimed proportions (Col 2, lines 1-6; examples 4, 7, Table 1). The disclosure of dispersion particle sizes of 40-400 nm (Col 5, lines 1-5) inherently meets the claim limitations of "colloid forming polymeric acid" (see instant specification page 9). The reference specifically or inherently meets each of the claimed limitations.

The reference is anticipatory.

In the event that any minor modifications are necessary to meet the claimed limitations, such as variation in organic solvent/polymer ratio, such modifications are well within the purview of the skilled artisan.

Claims 1-4, 8, 9, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pickup et al (Electronically conducting cation-exchange polymer powders...).



Pickup discloses PEDOT/Nafion dispersions in acetonitrile/water mixtures (Abstract; Table 2).

The reference differs from the above listed claims in failing to specify the claimed ratio of organic liquid to total polymer.

The examiner respectfully submits that the skilled artisan would have to utilize only routine testing in or to arrive at the claimed ratio. It is known in the art to vary the ratio of solvent to polymer in order to tailor properties of the resultant films. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Claims 1-9 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al (4,869,979).

Ohtani discloses conducting organic polymer battery is disclosed, which comprises a cathode comprising a conducting organic polymer doped with a polymer anion having a number of anionic groups in the molecule thereof (Abstract). The reference specifically discloses polythiophene and Nafion dopant (Col 3, lines 20-45). The solvent for the electrolyte solution as an ion-conductive phase usually includes organic solvent, e.g., propylene carbonate, dimethoxyethane, acetonitrile,

Art Unit: 1751

trimethoxymethane, sulforan, dimethyl sufoxide, dimethylformamide, .gamma.-butyrolactone, benzonitrile, N-methyl-2-pyrrolidone or dimethylacetamide, water, and. mixed solvents of water and the above-enumerated organic solvents (Col 4, lines 17-25).

The reference differs from the above listed claims in failing to specify the claimed ratio of organic liquid to total polymer.

The examiner respectfully submits that the skilled artisan would have to utilize only routine testing in or to arrive at the claimed ratio. It is know in the art to vary the ratio of solvent to polymer in order to tailor properties of the resultant films. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

In view of the foregoing, the above claims have failed to patentably distinguish over the applied art.

Applicant is reminded that any evidence to be presented in accordance with 37 C.F.R. 1.131 or 1.132 should be submitted before final rejection in order to be considered timely.

The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative

Art Unit: 1751

to or less material than the prior art references relied upon in the rejection above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Kopec whose telephone number is (571) 272-1319. The examiner can normally be reached on Monday - Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1751

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Mark Kopec  
Primary Examiner  
Art Unit 1751

MK  
May 6, 2007